VARIOUS.

Coloring of Marble and other Building Stones.

The coloring of marble has been practised a long time, but heretofore its results have not been altogether satisfactory. It has always been considered a difficult process, and the piece of marble to be colored required great care in its selection, that it might be free from spots or veins. Heat, to open the pores of the stone so as to prepare the stone to receive the colors, has been considered essential. It is true that many of the colors used would strike into the texture of marble while cold, but they would not sink to a desirable depth and the color remained on the surface.

The colors required and the vehicles employed to convey them to the stone have been numerous and various. Horses or dogs' urine with lime and potash, lye from wood ashes, alcohol, oily liquors, spirits of turpentine, and wine, are menstruums which have given some of the best results. The coloring matters used have been drawn from the animal, vegetable, and mineral kingdoms. Among them may be enumerated, extracts of saffron, buckthorn berries, alkanet root, dragons' blood, logwood, cochineal, gamboge, vermillion, yellow prussiate of potash etc., etc.

The art of marble staining has been generally kept a secret by those who have achieved the greatest success in it, and has proved a lucrative employment.

We have said that the results attained have not proved entirely satisfactory. Either the colors have proved fugitive or changeable after a time, to as to impair the effect of the combinations in which they were placed, or the stone would not bear polishing after the process, or was only a surface color, liable to wear out when used for floors, steps or in other situations where it was liable to attrition.

The superior advantages of a method which should impregnate the entire mass, as much in the interior as the exterior, and before polishing as well as after, are too obvious to be dwelt upon.

Such a process is claimed by Dr. S. A. Weisse, who has for a long time been experimenting in this field. We have not been put in possession of the details of this process, but we are able, from personal observation to testify as to the results obtained. The stones are colored through and through, not only marble but even granite having been subjected to the process with entire success. We are informed that the process is based upon the discovery of a new mordant, which has such an attraction for stone, that when a large block has only its base immersed in the solution, it will in a short time become permeated through the entire mass, increasing its specific gravity, and filling its pores so that the absorption of water is rendered very much less when subsequently exposed to the weather than previous to the operation. When it is remembered that the absorption of water, and its subsequent expansion by frost is one of the greatest causes of disintegration in our climate, it will at once be seen that an important collateral gain is obtained by the new process. Marbles colored by this process in the rough, afterward take a most beautiful polish, and specimens of dolomite polished previous to coloring have their polish hightened by it.

An effort has been made in this process to imitate the means by which the valuable colored building stones naturally receive their color. No attempt is made to produce a given pattern, or to imitate any particular effect. The general tone of the color is produced and the variations of the tints are determined by the structure of the stone itself. In this way the effects are all natural. We have before us a piece of marble picked up in a common marble yard, of a cheap variety one side polished the other rough, which has been colored by this process, and which the best judges invariably prononce to be genuine Sienna marble.

The colors produced include the entire range of tints, and the veins and spots which develop themselves in marble, which previous to the operation is pure white, are surprising and beautiful. The cheapest grades of stone are thus rendered ornamental and desirable, and the combinations rendered possible by this discovery must arrest the attention of architects. We do not exaggerate when we say that some of the most excellent specimens of natural stones, celebrated for their beauty, seem dull in their colors when placed by the side of those prepared by this process. Their adaptation to church architecture, as well as the adornment of private dwellings, will be admitted by all those who inspect them. *Scientific American.*

New Paints.

At a recent meeting of the French Academy, M. Sace called attention to the fact that tungstate of baryta forms an excellent white paint, which has as good a tone and depth as white lead, and has the advantage above this of not getting blackened on exposure to the atmosphere. Zinc white, which was tried as a substitute for white lead, has failed, he said, through wanting body. M. Elie de Beaumont remarked that if this statement was confirmed, it would be of great importance; for we have no need to employ special mining operations for tungsten, as this metal is commonly found in company with tin.

Also in the United States much interest has been excited by the discovery of a mineral which is said to possess the most valuable qualities of white lead, while superior in many respects to the manufactured article. The mine in which it has been found is situate in North Carolina, and has been worked for many years as silver and lead mine. The vein, however, presents an unprecedented variety and association of minerals. Lead, silver, zinc, copper, gold, iron, and manganese are found in the workings, which are continually varying in character. The ore usually averages about 30 per cent. of lead. The powder manufactured from the ore, when mixed with oil, it is said, forms the most durable paint known, and a yacht upon which it has been tried has been sailing for the past summer whithout coppering of any kind. The works for manufactering this powder into white lead are situate at Bergen Point, New Jersey. There is something not clear, however, in what is said as to the nature of the paint: it is said to stand a fierce heat without change. *The Builder.*

A Cheap and Good Whitewash.

Dissolve 6 lb. of fine white pipe-clay in as much water as will make it as thick as paint; soak and dissolve 1/4 lb. of good glue; add and mix well; then add 1/2 lb. of fat or dripping of any kind, put on the fire and boil a few minutes, and use while hot. The fat being boiled with the pipe-clay forms a kind of insoluble soap, which, if used while hot defies all kinds of weather. It may be colored to suit the taste. *R.*

Artificial Ebony.

This substance, now used to a considerable extent, is said to be prepared by taking sixty parts of seaweed charcaol, obtained by treating the seaweed for two hours in dilute sulphuric acid, then drying and grinding it and adding to it ten parts of liquid glue, five parts of gutta-percha and two and a half parts of India-rubber the last two dissolved in naphtha; then adding ten parts of coal tar, five parts pulverised sulphur, two parts pulverised alum, and five parts of powdered rosin, and heating the mixture to about 300 degrees Fahrenheit. We thus obtain, after the mass has become cold, a material which, in color, hardness and capability of taking a polish, is equal in every respect to ebony, and much cheaper. *Scientific American.*
